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Applicant(s): GOURLAY, *et al.*
Examiner: Jeffrey R. Swearingen
Group Art Unit: 2445

Amendments to the Claims:

Status of Claims:

Claims <u>1, 3-13 and 28-35</u> are pending for examination.

Claims ____<u>2 and 27</u>____ were previously canceled.

Claims ____<u>14-26</u>____ were previously withdrawn.

Claims ____<u>1 and 34</u>____ are in independent form.

Claims ____<u>34 and 35</u>____ are newly added.

Claims Listing

1.   (Previously Presented) In a data communication device including multiple communication ports, a method of configuring at least one of the communication ports, the method comprising:

monitoring a communications protocol associated with a remote device on a given communication port of the data communication device without participating in the communications protocol;

detecting that the remote device uses a particular protocol in which to communicate through the given communication port with a network resource;

based on the monitored communications, detecting an attribute of the remote device;

in response to detecting the attribute of the remote device, retrieving one of multiple configuration profiles corresponding to the attribute of the remote device; and

configuring the given communication port of the data communication device with the retrieved one of multiple configuration profiles to support future communications with the remote device, wherein configuring the given

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communication port includes configuring the given communication port to communicate using the particular protocol used by the remote device to communicate through the given communication port.

2.   Cancelled

3.   (Previously Presented) The method as in claim 1, wherein monitoring communications with the remote device on the given communication port includes:

monitoring initial communications with the remote device based on the communications protocol after coupling the remote device to the data communication device via the given communication port.

4.   (Previously Presented) The method as in claim 1 further comprising:

in the event that a configuration profile does not exist for the detected attribute of the remote device, configuring a corresponding communication port of the communication device with a default configuration profile.

5.   (Previously Presented) The method as in claim 1 further comprising:

polling a network node for updated configuration profiles; and

in response to polling, storing at least one of the updated configuration profiles from the network node to local memory of the data communication device.

6.   (Previously Presented) The method as in claim 1 further comprising:

receiving a message at the data communication device from a network node indicating availability of updated configuration profiles; and

receiving the updated configuration profiles from the network node to local memory of the data communication device.

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7.   (Previously Presented) The method as in claim 1, wherein detecting the attribute of the remote device includes:

determining a network address associated with the remote device;

identifying a particular type associated with the remote device; and

wherein retrieving one of multiple configuration profiles includes retrieving a configuration profile depending on the identified particular type of remote device.

8.   (Previously Presented) The method as in claim 7, wherein detecting the attribute of the remote device indicating its type includes detecting an attribute based on at least one of : 802.1x user authentication, CDP (Cisco Discovery Protocol), MAC address/mask assignment, IP address assignment, DHCP (Dynamic Host Configuration Protocol) response, ACL (Access Control Lists), and hardware and software associated with the remote device.

9.   (Previously Presented) The method as in claim 1, wherein detecting the attribute of the remote device includes:

detecting a change in a network address associated with the remote device.

10.   (Previously Presented) The method as in claim 1, wherein retrieving one of multiple configuration profiles includes retrieving one of multiple configuration profiles that includes information indicating how to set at least one parameter of the given communication port to support future communications with the remote device

11.   (Previously Presented) The method as in claim 10, wherein configuring the given communication port of the data communication device with the retrieved configuration profile includes setting the given port of the data communication device based on at least one of the following parameter types: protocol type, LACP (Link Aggregation Control Protocol, security policies, security parameters, access control

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lists, UDLD (Uni- Directional Link Detection), Etherchannel, Spanning Tree, VLANs (Virtual Local Area Networks), routing protocols, and QoS (Quality of Service).

12.   (Previously Presented) The method as in claim 1 further comprising:

storing the multiple configuration profiles at a network node accessible to the data communications device over a network link; and

wherein retrieving the configuration profile includes obtaining a configuration profile from the network node accessible to the data communication device.

13.   (Previously Presented) The method as in claim 1, wherein monitoring communications associated with the remote device includes:

applying multiple attribute discovery mechanisms to identify a corresponding configuration profile to configure the given communication port associated with the remote device, the multiple attribute discovery mechanisms including: i) a first attribute discovery mechanism for discovering an authentication attribute associated with the remote device, and ii) a second attribute discovery mechanism for discovering a change in a setting associated with the remote device.

14.   (Withdrawn) A data communication device comprising:

at least two communication ports; and

at least one processor device that:

monitors a communications protocol associated with a remote device on a given communication port of the data communication device without participating in the communications protocol;

detects an attribute of the remote device based on the monitored communications;

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retrieves one of multiple configuration profiles corresponding to
the attribute of the remote device in response to detecting the attribute
of the remote device; and

configures the given communication port of the data
communication device with the retrieved one of multiple configuration
profiles to support future communications.

15.   (Withdrawn) The data communication device as in claim 14, wherein the at
least one processor monitors for at least one of multiple communications protocols
potentially associated with the remote device.

16.   (Withdrawn) The data communication device as in claim 14, wherein the at
least one processor monitors initial communications with the remote device based
on the communications protocol after the remote device has been coupled to the
data communication device through the given communication port.

17.   (Withdrawn) The data communication device as in claim 14, wherein the at
least one processor configures a corresponding communication port of the
communication device with a default configuration profile in the event that a specific
configuration profile does not exist for the detected attribute of the remote device.

18.   (Withdrawn) The data communication device as in claim 14, wherein the at
least one processor additionally:
        polls a network node for updated configuration profiles; and
        in response to polling, obtains at least one of the updated configuration
profiles from the network node to local memory of the data communication device.

19.   (Withdrawn) The data communication device as in claim 14, wherein the at least one processor additionally:

receives a message at the data communication device from a network node indicating availability of updated configuration profiles; and

wherein the data communication device further comprises:

a memory device to store the updated configuration profiles retrieved from the network node.

20.   (Withdrawn) The data communication device as in claim 14, wherein the at least one processor additionally:

determines a network address associated with the remote device;

identifies a particular type associated with the remote device; and

retrieves a configuration profile depending on the identified particular type of remote device.

21.   (Withdrawn) The data communication device as in claim 20, wherein the attribute of the remote device indicating its type is detected based on at least one of : 802.1x user authentication, CDP (Cisco Discovery Protocol), MAC address/mask assignment, IP address assignment, DHCP (Dynamic Host Control Protocol) response, ACL (Access Control Lists), and hardware and software associated with the remote device.

22.   (Withdrawn) The data communication device as in claim 14, wherein the at least one processor additionally:

detects a change in a network address associated with the remote device.

23.   (Withdrawn) The data communication device as in claim 14, wherein the at least one processor configures the given communication port of the data

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communication device with the retrieved configuration profile by setting the given port of the data communication device based on at least one of the following parameter types: protocol type, LACP (Link Aggregation Control Protocol, security policies, security parameters, access control lists, UDLD (Uni- Directional Link Detection), Etherchannel, Spanning Tree, VLANs (Virtual Local Area Networks), routing protocols, and QoS (Quality of Service).

24.   (Withdrawn) The data communication device as in claim 14 wherein the multiple configuration profiles are stored at a network node accessible to the data communications device over a network link.

25.   (Withdrawn) The data communication device as in claim 14, wherein the at least one processor additionally:

applies multiple attribute discovery mechanisms to identify a corresponding configuration profile to configure the communication port associated with the remote device.

26.   (Withdrawn) A data communication device comprising:

at least two communication ports;

means for monitoring a communications protocol associated with a remote device on a given communication port of the data communication device without participating in the communications protocol;

means for detecting an attribute of the remote device based on the monitored communications;

means for retrieving one of multiple configuration profiles corresponding to the attribute of the remote device in response to detecting the attribute of the remote device; and

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means for configuring the given communication port of the data communication device with the retrieved one of multiple configuration profiles to support future communications.

27.   Cancelled

28.   (Previously Presented) The method as in claim 1, wherein the data communication device is a switch device having the multiple communication ports on which to communicate with multiple different remote devices; and

wherein configuring the given communication port includes configuring the given port of the switch device based on learned attributes of the remote device, configuring of the given communication port enabling communications from a source through the given communication port over a network connection to the remote device.

29.   (Previously Presented) The method as in claim 1, wherein the data communication device is a switch device 28 in a network, the method further comprising:

after configuring the given communication port, notifying the remote device that the given communication port of the data communication device has been configured via use of the retrieved one of multiple configuration profiles.

30.   (Previously Presented) The method as in claim 29 further comprising:

in response to configuring the given communication port with the retrieved one of multiple configuration profiles, notifying the remote device how to set parameters associated with a port of the remote device.

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31.   (Previously Presented) The method of claim 7, wherein identifying the particular type associated with the remote device includes detecting that the network address assigned to the remote device falls within a range of network addresses, each of multiple similar types of remote devices having an assigned address in the range requiring similar types of communication port settings; and

wherein identifying the particular type associated with the remote device comprises determining the particular type based on knowing a type associated with the multiple remote devices that have a corresponding network address falling within the range.

32.   (Previously Presented) A method as in claim 1, wherein detecting the attribute of the remote device comprises detecting a first attribute of the remote device, the method further comprising:

detecting a second attribute associated with the remote device;

identifying a higher associated priority of the first attribute and the second attribute;

utilizing one of the first attribute and second attribute having the identified higher associated priority in which to identify a corresponding configuration profile for configuring the given communication port.

33.   (Previously Presented) A method as in claim 1, wherein the data communication device is a switch device and wherein configuring the given communication port comprises:

identifying a quality of service as specified by the retrieved one of multiple configuration profiles; and

setting the given communication port to support the quality of service as specified by the as specified by the retrieved one of multiple configuration profiles.

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34. (New) A method, comprising:

in response to detecting a connection to one of a plurality of communication ports in a network device from a remote network device, determining an attribute of the remote network device, and configuring the one of the plurality of communication ports according to a matching dynamically assigned global port profile as a function of the attribute.

35. (New) The method of claim 34,

where the dynamically assigned global port profile is one of a plurality of dynamically assigned global port profiles, and where the assignment of a dynamically assigned global port profile is based, at least in part, on a network policy.